

Is oro-dental induced pluripotent stem (iPS) cells an alternate for dental stem cell banking?

P.M. Sunil

Rajah Muthiah Dental College, India

Dental stem cells, a new area of stem cell research is gaining popularity in recent days, due to its easy accessibility and plasticity. With these advantages, banking of dental stem cells is gaining momentum all over world. On other hand, induced pluripotent stem cells (iPSC) from oro-dental area have attracted many researchers towards it. This poster comparatively reviews the advantage and disadvantage of dental stem cell banking with iPSC of oro-dento facial region. The iPS cells are derived by reprogramming the cells by transfecting with specific transcriptional factors. Recent studies have shown that, dental pulp cells can be efficiently reprogrammed than dermal fibroblasts. Other than dental pulp, iPSC were also made from other tissues of oro-dento facial area namely, gingival fibroblasts and periodontal ligament fibroblasts. The disadvantages of iPS cells like, tumor and teratoma formation can be avoided by using newer non integration techniques. Various studies have shown that iPSC, were generated multi fold times from dental pulp when compared to dermal fibroblasts. The iPS cells were also successfully isolated from third molars which proved that, it can be isolated from any teeth which are discarded.

Biography

P. M Sunil completed his post graduation from government dental college, Chennai, India in 2001 and Ph.D from Annamalai university, Chidambaram. Dr. Sunil is the first PhD in Oral pathology in Tamilnadu, India and has both national and international publications. He also has given several guest lectures in both national and international conferences. At present, Dr.Sunil is professor and Head ,Dept of oral and maxillofacial pathology, RMDCH, Annamalai university.

sunilnarien@gmail.com